



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO. <i>KM</i>
-----------------	-------------	----------------------	-------------------------------

[Faint, illegible text]

[Faint, illegible text]

EXAMINER

ART UNIT	PAPER NUMBER
----------	--------------

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trad marks

Office Action Summary

Application No.	Applicant(s)
09/462,613	HERBOTS ET AL.
Examiner	Art Unit
Eisa B Elhilo	1751

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on June 27, 2001
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 27-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 27-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other _____

DETAILED ACTION

1 This action is responsive to the amendment filed on June 27, 2001.

2 Objection to specification regarding the missing abstract is withdrawn because the
applicant submits the abstract.

3 The rejection of claims 37, 42, 44, 46 and 49 under 35 U. S. C. 112, second paragraph is
withdrawn because of the correction of the Markush languages of these claims.

4 Rejection of claim 53 under 35 U. S. C. 112, second paragraph is withdrawn because of
the correction of the dependency of this claim.

5 Claim 58 (Amended) stand rejected under 35 U. S. C. 112, second paragraph for the
reasons set forth in the previous office action in paper number 7 dated March 19, 2001.

6 The rejection of claims 1, 27-29, 31-49 and 54-62 under 35 U. S. C. 103(a) as being
unpatentable over Oxenboll et al. (US' 5,834,280) is withdrawn because the reference does not
teach or suggest oxidoreductase with an α/β -hydrolase fold and a catalytic trial consisting of the
the amino acid residues serine, histidine and aspartic acid.

7 Claims 1 and 30 (Amended) stand rejected under 35 U. S. C. 103(a) as being
unpatentable over Oxenboll et al. (US' 5,834,280) in view of Van Pee (WO' 96/06909) for the
reasons set forth in the previous office action in paper number 7 dated March 19, 2001.

8 Claims 1, 27-55, 57 and 61 stand rejected under 35 U. S. C. 103(a) as being unpatentable
over Van Pee (WO' 96/06909) in view of Figueroa et al. (US' 5,500,153) for the reasons set
forth in the previous office action in paper number 7 dated March 19, 2001.

NEW GROUND OF REJECTION

Claim Rejections - 35 USC § 112

- 9 The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 32-33, 41 and 47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 32-33, 41 and 47 are indefinite because the dependency of these claims is improper.

Claim Rejections - 35 USC § 103

- 10 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 27-49 and 54-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oxienboll et al. (US' 5,834,280) in view of Van Pee (WO 96/06909).

Oxienboll (US' 280) teaches detergent composition comprising surfactant system (see col.27, lines 19+), hydrogen peroxide source (see col. 24, line 55) and fatty acids as organic acids (see col. 27, lines 5+). Regarding claims 31-33, the determination of the percentage amounts of the organic acid in the composition is obvious within the level of the one having ordinary skill in the art, and the person would be motivated to determine optimum amounts to get the maximum effect of the composition. Oxienboll also teaches detergent composition comprising

fatty acids and mono- and di- triglycerides of fatty acids (see col. 27, lines 5+). Oxenboll further teaches glucose oxidase oxidizes D-glucose in the presence of oxygen producing D-gluconic acid and hydrogen peroxide. The hydrogen peroxide formed, in the presence of peroxidase. After a fixed reaction time the amount of hydrogen peroxide is measured (1 UNIT is the amount of glucose oxidase which under the standard conditions forms 1 μ mole of hydrogen peroxide per minute (see col. 11, lines 13+). Oxenboll also teaches peroxy bleach compounds such as alkali metal perborates and alkali metal percarbonates (see col. 28, lines 20+). Regarding claims 45-46, Oxenboll teaches detergent composition comprising enzymes selected from the group consisting of an amylases an α -amylase or a maltogenic exo-amylase (see col. 25, lines 65+). Regarding claims 47-49, Oxenboll teaches detergent composition may additionally contain other bleaching agents such as perborates and percarbonates with activator materials such as tetraacetylenediamine (TAED) and nonanoyloxybenzenesulfonate (NOBS) (see col. 28, lines 20+). Regarding claim 54, Oxenboll teaches enzyme-having activity in the alkaline region (see col. 24, lines 54+). Oxenboll also teaches detergent composition comprising surfactant system (see col.27, lines 19+), hydrogen peroxide source (see col. 24, line 55), enzymes (see col. 27, lines 35-37) and fatty acids as organic acids (see col. 27, lines 5+) used for fabric conditioners (see col. 28, lines 37+) and the methods of cleaning and removing bacteria from teeth, mouth, dishware and contact lenses (see col. 9, lines 19+ and col. 76, claim 13).

The instant claims differ from the reference only by reciting oxidoreductase enzyme consisting of amino acid residues histidine, serine and aspartic acid.

Van Pee (WO' 909) teaches in analogous art, enzymatic active oxygen-releasing mixture be used as oxidizing agents for preparing chemical compounds and in bleaching, washing.

cleaning and disinfecting agent. The mixture contains oxidoreductase with an α/β -hydrolase fold and a catalytic triad consisting of aminoacids serine, histidine and aspartic acid, a peroxide source, and an aqueous solution of an organic acids (see the abstract and page 2, lines 30+). Van Pee also teaches *Serratia marcescens* as a source of the oxidoreductase (see page 7, line 11). Regarding claims 27-29, the determination of the percentage amounts of the enzyme in the composition is obvious within the level of the one having ordinary skill in the art, and the person would be motivated to determine optimum amounts to get the maximum effect of the composition.

Therefore, in view of the teaching of the secondary reference, one having ordinary skill in the art would have been motivated to modify the primary reference by using oxidoreductase to make such a composition. Such modification would be obvious because Oxenbol teaches detergent composition that may additionally comprises one or more other enzymes (see col.27, lines 34-36). The person of ordinary skill in the art would expect such composition to have similar properties to those claimed, unexpected results.

Response to Applicant's Arguments

11 Applicant's arguments filed June 27, 2001 have been fully considered but they are not persuasive.

With respect to the rejection based upon Oxenbol in view of Van Pee, Applicant argues that the subject composition of Van Pee are designed for use at a pH range of 3.5 to 6.0, which is outside the optimal pH range of the claimed enzymes. Applicant also argues that Van Pee fails to teach detergent compositions comprising the aforementioned constituents, surfactant and an enzymatic bleach system. Applicant further argues that Oxenbol neither teaches nor suggests an oxidoreductase selected from the *Serratia marcescens*. Applicant also argues that there is no motivation in combining the detergent composition of Oxenbol with the enzymatic active oxygen-releasing mixture of Van Pee.

The examiner respectfully disagrees with the above arguments because Van Pee teaches enzymatic active oxygen-releasing mixture to be used as oxidizing agents for bleaching agents and thus the reference teaches bleaching system (see the abstract). Van Pee teaches enzymatic mixture that has a pH of 6.8 (see page 9, lines 16), which is about 7, and hence, the pH range is inside the optimal pH range of the claimed enzymes.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Oxenbol teaches detergent composition that may additionally comprises one or more other enzymes (see col.27, lines 34-36). Therefore, there is a reasonable expectation of success

for the motivation in combining the enzymatic mixture of Van Pee with the detergent composition of Oxenbol reference.

With respect to the rejection based upon Van Pee in view of Figueroa, Applicant argues that Van Pee fails to teach a cleaning composition comprising the enzymatic activity within the pH range of the claimed invention. Applicant also argues that there is no motivation in combining the detergent composition of Figueroa with the enzymatic active oxygen – releasing mixture of van Pee.

The examiner respectfully disagrees with the above arguments because Van Pee teaches a mixture that has a pH of 6.8 (see page 9, lines 16), which is about 7, and hence, the pH range is inside the optimal pH range of the claimed enzymes. Figueroa teaches detergent composition that comprises enzymes of any suitable origin such as bacteria and fungal. Therefore, there is a reasonable expectation of success for the motivation in combining the enzymatic mixture of Van Pee with the detergent composition of Figueroa reference.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eisa B Elhilo whose telephone number is (703) 305-0217. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on (703) 308-4708. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 305-3599 for After Final communications.

Application/Control Number: 09/462,613

Page 8

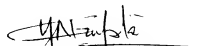
Art Unit: 1751

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

EF

Eisa

September 6, 2001



YOSEENDRA N. GUPTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700